

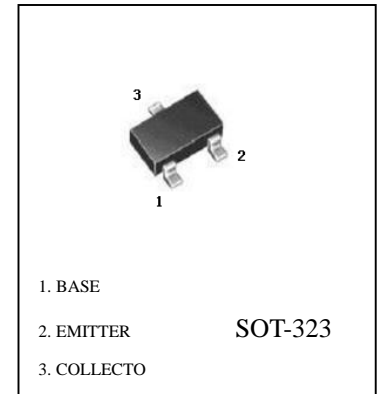
FEATURES

High breakdown voltage

Low collector-emitter saturation voltage

Complementary to MMSTA92(PNP)

Marking: K3M

MMSTA42(NPN)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	300	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_C	300	mA
Collector Power Dissipation	P_C	300	mW
Storage Temperature	T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C=100\mu A, I_E=0$	300			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C=1mA, I_B=0$	300			V
Emitter-base breakdown voltage	V_{EBO}	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=200V, I_E=0$			0.25	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=10V, I_C=1mA$	60			
	$h_{FE(2)}$	$V_{CE}=10V, I_C=10mA$	100		200	
	$h_{FE(3)}$	$V_{CE}=10V, I_C=30mA$	75			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=20mA, I_B=2mA$			0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=20mA, I_B=2mA$			0.9	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA, f=30MHz$	50			MHz

MMSTA42 Typical Characteristics

